



The State of New Hampshire  
**DEPARTMENT OF ENVIRONMENTAL SERVICES**



**Thomas S. Burack, Commissioner**

January 9, 2008

The Honorable Candace C.W. Bouchard, Chairman  
N.H. House of Representatives  
Public Works and Highways Committee  
Legislative Office Building, Room 201  
Concord, New Hampshire 03301

**Re: House Bill 1355, exempting alternative and renewable fuels from the road toll**

Dear Chairman Bouchard and Members of the Committee:

Thank you for the opportunity to comment on behalf of the Department of Environmental Services (DES) regarding HB 1355, which seeks to exempt alternative and renewable fuels, in particular biodiesel and vegetable oils, from the road toll requirements. While DES is supportive of efforts to promote the use of cleaner burning renewable fuels, the department is opposed to this bill as this issue is more appropriately addressed by the Biodiesel Study Commission and certain provisions may conflict with federal law.

In the 2006 legislative session, House Bill 689 established the Biodiesel Study Commission that met numerous times between July and November 2007. A final commission report was issued in November 2007 that outlined 16 specific recommendations to promote the production, distribution, and use of biodiesel in New Hampshire. The provisions of this bill are inconsistent with the recommendations of that report and resulting legislation that will be heard in other House and Senate committees during the current legislative session. In addition, House Bill 1632, which will be heard later in this session by the Science, Technology, and Energy Committee, seeks to continue the Commission for an additional year to further study means to increase the use of biodiesel in the state.

Due to conflicts with federal law and uncertain emission characteristics, the department opposes any efforts to increase the use of straight vegetable oil (SVO) and waste vegetable oil (WVO) as motor vehicle fuels. With rising petroleum prices there has been an increase in recent years in the conversion of diesel vehicles to operate on SVO/WVO in lieu of petroleum diesel fuel or biodiesel (which does not require a vehicle modification to use). This type of conversion is considered "tampering" under federal law as more fully explained in the text of a letter from the Environmental Protection Agency (EPA) to a representative of Greasecar Vegetable Fuel Systems, LLC, a leading manufacturer of SVO/WVO conversion kits, found in Attachment A of this testimony. In the letter EPA clearly spells out the requirements for certifying such conversion kits to demonstrate that they will not cause an increase in emissions from the vehicle. To date, no SVO/WVO conversion kits have obtained certification from EPA. Many individuals undertake conversions of their vehicles without purchasing a "conversion kit" and it is not immediately clear if this is in violation of federal law. However, sale of a vehicle after such a modification would constitute a violation.

DES Web site: [www.des.nh.gov](http://www.des.nh.gov)

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Motor vehicle fuels are regulated by the Clean Air Act Amendments of 1990 (CAA), specifically Section 211, portions of which are included as Attachment B to this letter. The CAA requires motor vehicle fuels be registered with the Environmental Protection Agency (EPA), an action that generally requires submittal of test data documenting potential health impacts of the fuel. To date SVO and WVO are not registered with the EPA, and therefore their sale and use as a motor vehicle fuel would likely constitute a violation of federal law.

SVO and WVO have undergone very limited emissions testing which is one reason they have not yet met the requirements to be a registered fuel. However, two studies conducted on emissions of SVO/WVO, one undertaken for the Department for Transport in England<sup>1</sup> and one conducted by Yale University<sup>2</sup> have indicated an increase in several toxic air contaminants as compared to use of petroleum diesel in the same engine. Due to the limited test data and the outcomes of these two studies, further testing will be necessary before EPA can register SVO/WVO as a motor vehicle fuel, and before states should encourage their use.

Through our Air Resources Division and the Granite State Clean Cities Coalition, DES has worked for many years to improve air quality through increased use of advanced vehicle technologies, cleaner burning motor vehicle fuels, and improved fuel economy. The department supports efforts to increase the use of biodiesel provided the fuel meets stringent fuel quality standards established by ASTM International. However, the established Biodiesel Study Commission provides the appropriate forum in which to develop legislative recommendations to achieve the goal of increasing the use of this cleaner, renewable fuel in a sustainable and manageable manner.

Thank you again for the opportunity to comment on HB 1355. Please call me at 271-3503 or Rebecca E. Ohler, Supervisor of the Mobile Source Section, at 271-6749 if you have any questions or would like further information.

Sincerely,

A handwritten signature in black ink, reading "Thomas S. Burack". A large, red, diagonal "COPY" stamp is overlaid across the signature.

Thomas S. Burack  
Commissioner

cc: Rep. John Knowles  
Rep. David Borden, Chair HB 689 Biodiesel Study Commission

<sup>1</sup> <http://www.dft.gov.uk/pgr/roads/environment/research/cqvcl/dftbiofuelsevaluationofemiss3823>

<sup>2</sup> <http://www.yale.edu/yedt/biofuel.pdf>



## ATTACHMENT A - TEXT OF LETTER FROM U.S. EPA TO GREASECAR

January 26, 2006

Michael Garjian  
Greasecar Vegetable Fuel Systems, LLC  
150 Pleasant Street  
Easthampton, MA 01027

Dear Mr. Garjian,

I am in receipt of your November 18, 2005 email, addressed to James Caldwell of the United States Environmental Protection Agency's (EPA) Office of Air and Radiation. In your email and its attachment you state your belief that Greasecar Vegetable Fuel Systems, LLC (Greasecar) is free to market kits that are used to modify diesel engines so that the engines will run on "heated vegetable oil" (vegetable oil conversion kits) and that marketing such kits does not violate the Clean Air Act. You asked if EPA agreed, and requested a response by the end of December.

The Code of Federal Regulations at 40 C.F.R. Part 85, Subpart F governs aftermarket conversion systems for which exemption is sought from enforcement of the tampering prohibitions contained in Section 203 of the Act. 40 C.F.R. 85.502(c) defines an *Aftermarket Conversion System* as:

any combination of hardware, including but not limited to fuel storage and fuel metering hardware, which is installed on a light-duty vehicle, light-duty truck, heavy-duty vehicle, or heavy-duty engine with the effect of allowing the vehicle or engine to operate on a fuel other than the fuel which the vehicle or engine was originally certified to use...

The tampering prohibition under Section 203(a)(3)(A) of the Clean Air Act (Act), 42 U.S.C. § 7522(a)(3)(A) prohibits any person from knowingly removing or rendering inoperative any device or element of design installed in a motor vehicle or motor vehicle engine in compliance with the statutory provisions regarding emission standards for motor vehicles after the vehicle or engine is sold and delivered to the ultimate purchaser; or from causing this prohibited act.

The vegetable oil conversion kits described in your letter allow diesel-powered motor vehicles to operate on heated vegetable oil. However, no vehicles have been certified by EPA to run on heated vegetable oil. As a consequence, these vegetable oil conversion kits have the effect of allowing a converted vehicle or engine to operate on a fuel other than the fuel which the vehicle or engine was originally certified to use, and, therefore, are an aftermarket conversion system within the meaning of 40 C.F.R. § 85.502(c).

In your email, you state that vegetable oil conversion kits are legal under the Act in part because "vehicles operating on vegetable oil using Greasecar conversion kits meet the minimum emission standards set forth under the Clean Air Act..." However, EPA has promulgated regulations that establish a mechanism for establishing whether vehicles that have been modified to operate on an alternative fuel meet federal emissions standards, at 40 C.F.R. Part 85, Subpart F. This mechanism allows the manufacturer of an alternative fuel conversion kit to present to EPA the evidence necessary to demonstrate the emissions performance of vehicles when using the alternative fuel kit, and for EPA to issue a certificate of conformity to the kit manufacturer if appropriate. There is no other mechanism for the manufacturer of an alternative fuel conversion kit to demonstrate to EPA the emissions performance of vehicles when converted and operating on the alternative fuel.

Therefore, for Greasecar to avoid violating the tampering prohibition based on its sale of vegetable oil conversion kits, it must obtain emissions certification for these vegetable oil conversion kits under 40 C.F.R. Part 85, Subpart F.

EPA's October 1, 2004 document titled "Updated Certification Guidance for Alternative Fuel Converters," provides additional information for persons who wish to obtain emissions certification for aftermarket fuel conversion kits. It can be found at <http://www.epa.gov/otaq/cert/dearmfr/ccd0420.pdf>. This guidance deals primarily with conversions allowing use of compressed natural gas and liquified petroleum, but also provides information that is appropriate for vegetable oil conversion kits.

In order to begin the process of obtaining emissions certification for your vegetable oil conversion kit, you should contact Martin Reineman of my staff at 734-214-4430. If you have other questions regarding EPA's anti-tampering policy based on the Clean Air Act, please contact David Alexander at 202-564-2109.

Sincerely yours,

Dan Harrison, Manager  
Light-Duty Vehicle Group  
Compliance and Innovative Strategies

Division

cc: MerryLin Zaw-Mon  
George Lawrence (OECA)  
Martin Reineman



ATTACHMENT B - CLEAN AIR ACT AMENDMENTS OF 1990, SECTION 211

Sec. 211. (a) The Administrator may by regulation designate any fuel or fuel additive (including any fuel or fuel additive used exclusively in nonroad engines or nonroad vehicles) and, after such date or dates as may be prescribed by him, no manufacturer or processor of any such fuel or additive may sell, offer for sale, or introduce into commerce such fuel or additive unless the Administrator has registered such fuel or additive in accordance with subsection (b) of this section.

(b)(1) For the purpose of registration of fuels and fuel additives, the Administrator shall require-

(A) the manufacturer of any fuel to notify him as to the commercial identifying name and manufacturer of any additive contained in such fuel; the range of concentration of any additive in the fuel; and the purpose-in-use of any such additive; and

(B) the manufacturer of any additive to notify him as to the chemical composition of such additive.

(2) For the purpose of registration of fuels and fuel additives, the Administrator may also require the manufacturer of any fuel or fuel additive-

(A) to conduct tests to determine potential public health effects of such fuel or additive (including, but not limited to, carcinogenic, teratogenic, or mutagenic effects), and

(B) to furnish the description of any analytical technique that can be used to detect and measure any additive in such fuel, the recommended range of concentration of such additive, and the recommended purpose-in-use of such additive, and such other information as is reasonable and necessary to determine the emissions resulting from the use of the fuel or additive contained in such fuel, the effect of such fuel or additive on the emission control performance of any vehicle, vehicle engine, nonroad engine or nonroad vehicle, or the extent to which such emissions affect the public health or welfare.

Tests under subparagraph (A) shall be conducted in conformity with test procedures and protocols established by the Administrator. The results of such tests shall not be considered confidential.

(3) Upon compliance with the provisions of this subsection, including assurances that the Administrator will receive changes in the information required, the Administrator shall register such fuel or fuel additive.